



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/578,478

06/07/2006

David James

TPP 32003

9030

77176

7590

06/08/2009

Novak, Druce & Quigg LLP  
1300 I Street, N.W.  
Suite 1000, West Tower  
WASHINGTON, DC 20005

EXAMINER

BERMAN, SUSAN W

ART UNIT

PAPER NUMBER

1796

MAIL DATE

DELIVERY MODE

06/08/2009

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/578,478	<b>Applicant(s)</b> JAMES ET AL.	
	<b>Examiner</b> /Susan W. Berman/	<b>Art Unit</b> 1796	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 18 March 2009.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 21-39 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 21,23,24,26-31,34 and 36-39 is/are rejected.
- 7) ☒ Claim(s) 22,25,32,33 and 35 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

Art Unit: 1796

***Response to Amendment***

The rejection of claims 17-20 under 35 U.S.C. 101 is moot.

The rejection of claims 1-20 under 35 U.S.C. 112, second paragraph, is not applied to new claims 21-24 and 26-39.

***Response to Arguments***

Applicant's arguments filed 3-18-2009 have been fully considered but they are not persuasive.

***Claim Objections***

Claims 24, 33 and 38 are objected to because of the following informalities: In claim 24, the word "monocraboxylic" should read "monocarboxylic". In claim 33, the word "metharcylic" in line 2 is a misspelling of "methacrylic". In claim 39, the phrase "come position" appears to be a misspelling of "composition". Appropriate correction is required.

***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 21, 25, 36, 39 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 21, line 17, it is not clear what is meant by "urethane  $\beta$ -methyl". What is the structure of this compound? Did applicant intend to set forth a urethane  $\beta$ -methyl (meth)acrylate?

Art Unit: 1796

In claim 25, line 2, the use of the word “obtainable” instead of “obtained” renders the claim indefinite because it is not clear whether applicant intends to claim a dendritic core polymer obtained by the process set forth or not.

Claim 36: it is noted that the claim does not clearly recite whether the initiator is optional or required.

Claim 39: it is noted that the claim does not clearly recite whether the initiator is optional or required. The photoinitiator in claim 37 is “optional” so claim 39 appears to recite only that if a photoinitiator is present the amount is 1-5% by weight.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 21, 23, 24, 26-31, 34 and 36-39 are rejected under 35 U.S.C. 103(a) as being unpatentable over Martin et al (7,094,826, having an effective filing date of 03-31-2003 or WO 02/32982, published 04-25-2002). Martin et al disclose an aqueous coating composition comprising a crosslinkable polyester dendritic macromolecule containing hydrophilic water-dispersing groups, fatty acid autooxidizable groups and that can have methacryloyl unsaturated end groups (See formula (i) and column 6, line 6, to column 8, line 45, especially column 7, lines 14-17). The aqueous coating compositions may contain a crosslinkable oligomer other than the

Art Unit: 1796

polyester macromolecule, a non-crosslinkable oligomer, a dispersed polymer, a co-solvent and water (column 12, lines 44-46, column 13, lines 21-38, and column 20, lines 28-42). A dispersed polymer having crosslinkable groups, such as (meth)acryloyl groups, is disclosed (column 15, line 3, to column 16, line 55). (Meth)acryloyl groups are taught in column 16, lines 6-12. The crosslinkable polyester macromolecule can be diluted with vinyl monomers (column 18, lines 7-15).

The Examples disclose preparation of a poly-alkoxylated adduct of methoxypolyethylene glycol and succinic anhydride in column 27, lines 1-12 which is then reacted with a core molecule having sixteen reactive –OH groups (i.e. Boltorn H20). A hyperbranched polyester prepared from Boltorn H20®, the adduct of methoxypolyethylene glycol and succinic anhydride and a linseed oil fatty acid is disclosed in column 27, lines 1-28. Additional hyperbranched molecules are disclosed in column 28 and Table 1 compounds A2, A3, A4, A6 and A8. Compositions comprising the hyperbranched macromolecule, a dispersed polymer and water are disclosed in the Examples.

It would have been obvious to one skilled in the art at the time of the invention to provide an aqueous composition comprising a crosslinkable hyperbranched macromolecule corresponding to the instantly recited amphiphilic dendritic polymer and a dispersed polymer having (meth)acryloyl functional groups corresponding to the non-amphiphilic polymer selected from the components taught by Martin et al. Martin et al provide motivation by teaching a crosslinkable hyperbranched macromolecule “A1” obtained by reacting a polyol core molecule with a linseed oil fatty acid and an adduct of methoxypolyethylene glycol and succinic anhydride. Martin et al provide motivation to employ a dispersed polymer having (meth)acryloyl

Art Unit: 1796

functional groups by teaching that the functional groups contribute to crosslinking (column 6, lines 6-12).

*Allowable Subject Matter*

Claims 22, 25, 32, 33 and 35 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. The features of these claims are not taught by Martin et al.

*Conclusion*

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Art Unit: 1796

Any inquiry concerning this communication or earlier communications from the examiner should be directed to /Susan W. Berman/ whose telephone number is 571 272 1067.

The examiner can normally be reached on M-F 9:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James Seidleck can be reached on 571 272 1078. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

SB  
6/5/2009

/Susan W Berman/  
Primary Examiner  
Art Unit 1796